

Remarks

Claims 1-12 and 15-27 are pending in the application. Claims 10 and 11 have been amended. New claim 27 has been added.

Support for the new claim and claim amendments can be found throughout the application. Therefore, no new matter has been added. Importantly, the claim amendments should not be construed to be an acquiescence to any of the claim rejections. Rather, the amendments to the claims are being made solely to expedite the prosecution of the above-identified application. The Applicants expressly reserve the right to further prosecute the same or similar claims in subsequent patent applications claiming the benefit of priority to the instant application. 35 USC § 120.

Finally, the Applicants gratefully acknowledge the Examiner's indication that claims 6-9 and 18-22 are allowable.

Claim Rejections Based on 35 USC § 112¶2

Claim 10 stands rejected under 35 USC § 112¶2, based on the Examiner's contention that "it is not clear if only the trisaccharide of the type shown at the top of claim 10 is claimed." In response, the Applicants have amended claim 10 to remove the bottom structure.

The removal of the structure rendered the definition of X irrelevant; the definition, therefore, has also been removed. Additionally, claim 10 has been amended to correct a typographical error. Specifically, the term "silyloxy" in the definition of R has been replaced with the intended term, "silyl." In support of the position that "silyloxy" was an erroneous formulation of "silyl," the Applicants point out that if R was silyloxy, the claims would encompass silyl peroxides, notoriously unstable compounds; whereas, when the correct term, "silyl," is inserted in the definition of R, the claims encompass well-known, stable silyl ethers.

In addition, the Applicants have added new claim 27 to encompass the subject matter removed by the amendment to claim 10. Importantly, the amendment to claim 10 and addition of new claim 27 were made to bring the claim 10 into compliance with 35

USC § 112¶2 and do not reflect a change in scope of the invention for which protection is sought.

Claim Rejections Based on 35 USC § 102(b)

Various sets of claims stand rejected under 35 USC § 102(b), based on the Examiner's contentions that they are anticipated by various patents and publications. To better organize the Applicant's traverses of the Examiner's rejections under 35 USC § 102(b), they are set forth below in paragraphs as identified in the Office Action.

Jaurand et al.

Claims 23-26 stand rejected under 35 USC § 102(b), based on the Examiner's contention that they are anticipated by Jaurand et al. *Bioorganic & Medicinal Chemistry Letters* **1992**, 2(9), 897-900 ("Jaurand"). Specifically, the Examiner contends that compound **15** of Jaurand has a $C_6H_5CH_2O-$ group on carbon-2 of the middle saccharide unit that 'reads on alkyl for R' of the instant structure.' The Applicants respectfully traverse.

Jaurand does not anticipate claims 23-26 because compound **15** of Jaurand does not fall within the scope of claims 23-26 because R'' does not include a $C_6H_5CH_2-$ group. The molecular fragment " $C_6H_5CH_2-$ " falls within the scope of fragments described as arylalkyl. See specification, page 18. Importantly, the Markush definition of R'' in claim 23 does not include arylalkyl. Moreover, the term "alkyl" in the Markush definition of R'' in claim 23 does not include alkyl groups that are substituted with aromatic groups. See specification, page 18. Accordingly, the Applicants respectfully request the withdrawal of the rejection under 35 USC § 102(b) based on the Jaurand reference.

Tamura et al.

Claims 1-4 stand rejected under 35 USC § 102(b), based on the Examiner's contention that they are anticipated by Tamura, J. et al. *Leibigs Ann.* **1996**, 1239-1257 ("Tamura"). Specifically, the Examiner contends that disaccharide **16 α** disclosed by Tamura anticipates the rejected claims. The Applicants respectfully traverse.

Compound 16 α of Tamura does not fall within the scope of claims 1-4. Specifically, the azide-containing saccharide moiety is a galactose residue in compound 16 α of Tamura. In contrast, the azide-containing saccharide moiety is a glucose moiety in both structural limitations contained in claim 1. Therefore, the Applicants respectfully assert that none of claims 1-4 reads on compound 16 α of Tamura. Accordingly, the Applicants respectfully request the withdrawal of the rejection under 35 USC § 102(b) based on the Tamura reference.

Rejections under 35 USC § 103(a)

Claims 11, 12, 16, and 17 stand rejected under 35 USC § 103(a), based on the Examiner's contention that they are unpatentable over Kahne et al. (U.S. Patent 5,700,916) in combination with Kovensky et al. (*Bioorganic and Medicinal Chemistry* 1999, 7, 1567-1580). Specifically, the Examiner contends that the Kahne patent discloses the "synthesis of oligosaccharides wherein a monosaccharide containing a hydroxyl group and covalently linked to a solid support is reacted with another monosaccharide containing an activated carbon atom to form an oligosaccharide." In addition, the Examiner contends that the Kovensky reference discloses "the sulfation and hydrogenolysis reactions in the solution phase."

In order to expedite prosecution, the Applicants have amended claim 11 to include the limitation that the activated anomeric carbon is activated by a hydroxyl, acyloxy, silyloxy, halide, alkylthio, arylthio, 4-alkenyloxy, aryloxy, or -OC(NH)CCl₃ group. Support for the claim amendment can be found in the specification and claims of the application as originally filed. In particular, the list of activating functional groups bonded to an anomeric carbon atom is presented in the Markush definition of X on page 25 of the application as originally filed. Importantly, the Kahne patent pertains only to sulfoxide activating groups and does not teach any of the activating groups listed in amended claim 11. Therefore, the Kahne patent alone or in combination with the Kovensky publication does not form the basis of a *prima facie* showing of obviousness because the Kahne patent alone or in combination with the Kovensky reference does not

teach all the limitations of amended claim 11. In support of their analysis, the Applicants respectfully remind the Examiner that in order to form the basis of a proper rejection under 35 USC 103(a), the reference or references must teach all of the limitations of the claim. *See In re Zurko*, 111 F.3d 887, 888-889, 42 USPQ 2d 1476, 1478 (Fed. Cir. 1997).

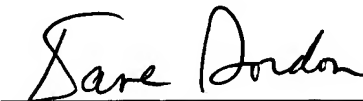
Finally, the Applicants contend that claims 12, 16, and 17 are nonobvious over Kahne and Kovensky because these claims are dependent on claim 11 which require specific activor groups as discussed above. Accordingly, the Applicants respectfully request the withdrawal of the rejection under 35 USC 103(a) based on the Kahne and Kovensky references.

Conclusion

In view of the above amendments and remarks, the Applicants believe that the pending claims are in condition for allowance. If a telephone conversation with Applicants' Attorney would expedite prosecution of the above-identified application, the Examiner is urged to contact the undersigned.

Respectfully submitted,
Foley Hoag LLP

By:



Dana M. Gordon, PhD
Reg. No. 44,719
Attorney for Applicants

155 Seaport Boulevard
Boston, MA 02210

Telephone: (617) 832-1000
Telecopier: (617) 832-7000

Date:

11/3/03